

# XP20 HFC-410A CHARGING INFORMATION – FOR COMPLETE CHARGING PROCEDURES, REFER TO THE APPLICABLE INSTALLATION AND SERVICE MANUAL

## Maintenance checks using the Normal Operating Pressures table

Table 1 may be used to help perform maintenance checks. This table is not a procedure for charging the system. Minor variations in the pressures can be expected due to differences in installations. However, significant deviations could mean that the system is not properly charged or that a problem exists with some component in the system.

## Matched System Components/Charge Levels/Line Set Length/Liquid Line Sizing

Table 2 lists all the Lennox recommended indoor unit matches along with the charge levels for the various sizes of outdoor units. Charge levels on the unit nameplate are based on installations with 15' (4.6m) line sets; consider line set length and liquid line sizing differences when calculating charge adjustments. For each additional foot of 3/8" liquid line set, add 0.6 ounces or for 1/2" liquid lines, add 1.0 ounce of additional charge.

## Charge Using the Weigh-in Method

If the system is void of refrigerant, locate and repair any leaks and then weigh in the refrigerant charge into the unit. For charge adjustments, be sure to consider line set length differences and, referring to table 2, adjust for the matchup difference.

- 1 - Recover the refrigerant from the unit.
- 2 - Conduct leak check; evacuate the system.
- 3 - Weigh in the unit nameplate charge, adjusting for matchup and line set length differences. If weighing facilities are not available use the Subcooling method.

## Charge Using the Subcooling Method

**Cooling Mode**—When the outdoor ambient temperature is 60°F (15°C) and above, use the cooling mode to adjust the charge using the subcooling method. Target subcooling values in table 2 are based on 70 to 80°F (21-27°C) indoor return air temperature.

**Heating Mode**—When the outdoor ambient temperature is below 60°F (15°C), use the heating mode to adjust the charge using the subcooling charge levels (table ). Target subcooling values in table 2 are based on 65-75°F (18-24°C) indoor return air temperature.

**Table 1 - Normal Operating Pressures (Liquid +10 and Suction +5 psig)**

Size	°F	Cooling		Heating		
		Max Speed		°F	Max Speed	
		Suc	Liq		Suc	Liq
<b>-024</b>	65	143	246	20	57	271
	75	145	280	30	68	286
	85	147	323	40	87	302
	95	150	371	50	105	317
	105	152	423	60	124	334
	115	155	481			
<b>-036</b>	65	93	266	20	62	332
	75	140	269	30	76	355
	85	142	311	40	90	372
	95	144	357	50	50	400
	105	146	410	60	125	415
	115	148	466			
<b>-048</b>	65	133	246	20	59	298
	75	135	286	30	67	301
	85	137	328	40	89	338
	95	138	376	50	106	351
	105	140	424	60	124	372
	115	142	480			
<b>-060</b>	65	235	132	20	62	327
	75	273	134	30	74	350
	85	322	137	40	88	377
	95	369	138	50	106	383
	105	421	140	60	125	403
	115	468	143			

**Table 2 - Indoor Unit Matchups and Subcooling Charge Levels**

INDOOR MATCHUP	HEAT PUMP	Target Subcooling		*Add charge		INDOOR MATCHUP	HEAT PUMP	Target Subcooling		*Add charge	
		Heating (+5°F)	Cooling (+1°F)	lb	oz			Heating (+5°F)	Cooling (+1°F)	lb	oz
<b>-024</b>						CH35-48C		18	7	5	1
CBX32MV-024 / -030		14	13	0	2	<b>-048</b>					
CR33-48B		13	11	0	4	CBX32MV-048		30	11	0	0
C33 / CX34-31		15	24	1	15	CBX40UHV-048		30	11	0	0
C33 / CX34-38		13	17	1	1	CH33-50 / 60C		23	12	2	5
CH35-30B		14	13	0	0	C33 / CX34-62C		23	13	3	1
<b>-036</b>						<b>-060</b>					
CBX32MV-036		28	10	1	12	CBX32MV-060		17	8	0	15
CBX40UHV-036		28	10	1	12	CBX40UHV-060		17	8	0	15
CH33-44 / 48B		23	10	1	0	CH33-49C		25	10	1	1
CH33-48C		19	10	0	0	CH33-50 / 60C		25	10	1	1
CR33-50 / 60C		14	11	3	4	CR33-60D		18	7	0	0
C33 / CX34-38		23	10	0	5	C33 / CX34-49		16	8	0	8
C33 / CX34-43		25	9	2	1	C33 / CX34-62C		22	11	2	1
CX34-44 / 48 C33-48		34	10	1	4	C33 / CX34-62D		18	10	1	8
CH35-48B		20	11	1	3	CH35-60D		30	9	0	3
C33 / CX34-50 / -60		25	9	2	1	<b>*Amount of charge required in addition to charge shown on unit nameplate. (Remember to consider line set length.)</b>					

NOTE - When charging a system with a C33 coil (cased or uncased) with a TXV installed, use the CX34 charge information.



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